



COMPARE AND COMPLEXITY – WHEN IS COMPARE  
NOT ENOUGH?

THESIS

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AFIT/GAQ/ENV/02M-10

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THESIS

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Abstract

COMPARE is the software model used to estimate Most Efficient Organization (MEO) labor costs during A-76 competitions and does an adequate job of cost estimation for units that provide generally low level technology services, labor and supervision to organizations. With Outsourcing and Privatization (O&P) being considered across a wider cross section of organizations, COMPARE may be unable to provide a comparable picture of MEO costs suitable for use in source selection.

The purpose of this research will be to identify common characteristics of more complex studies, specifically, the Air Force depot workload competitions at San Antonio Air Logistics Center (SA-ALC) and Sacramento Air Logistics Center (SM-ALC), and to highlight cost comparison factors that may not be adequately addressed in the COMPARE model. Once identified, an analysis of the underlying reasons for the difference in cost factors between models will be conducted. Results from research will confirm the current model (COMPARE) or will provide the basis for support and development of a new cost model.

Research design for this thesis will focus on case study methodology identified by Robert K.. Yin in his book *CASE STUDY RESEARCH Design and Methods* (1994). Details are outlined in Chapter 3 of this thesis.

# COMPARE AND COMPLEXITY – WHEN IS COMPARE NOT ENOUGH?

## I. Introduction

### Overview

#### *Problem Statement*

With an increased emphasis on achieving greater efficiencies in government operations through the introduction of competition, Outsourcing and Privatization (O&P) is now considered across a significantly wider cross-section of organizations. Over the last decade, O&P initiatives (i.e. Public-Private Competition and A-76 Studies) have thinned the range of candidates to the point where further competitions are becoming increasingly difficult to model within the constraints of the current A-76 costing model (COMPARE). Specifically, the standardized cost factors used in COMPARE are increasingly insufficient in providing a level playing field on which decision makers can make informed comparisons.

Identifying the gaps between cost factors in COMPARE and those commonly seen in Public-Private competition is the primary thrust of this research effort. Baseline cost factors will be identified as those used in the COMPARE model. With the exception of the Direct Conversion O&P option, the factors found in COMPARE represent the most basic form of comparison. On the other end of the spectrum are the cost factors used in Public-Private competition comparisons. In this study, cost factors from two Air Force depot Public-Private competitions will be used as a basis of comparison to the baseline

factors found in COMPARE. Exploration of this range of factors should provide significant insight into the limitations of the baseline cost factors, thereby increasing awareness of considerations for future O&P initiatives.

### *Overarching Issues*

Behind the impetus of O&P are many high level concepts regarding the appropriate relationships between business and government, their associated roles, and the means by which workload is delineated (i.e. organic/government or inorganic/private party). The following discussion provides a range of reactions to O&P trends.

“It is in service delivery that competition yields results – because competition is the one force that gives public agencies no choice but to improve” (8:55). This statement describes what has, over time, become a topic of contention between those charged with creating policy and those who must conduct business within its boundaries.

Budget cuts and business process reform have resulted in an increased interest in O&P over the last 50 years; especially with the resurgence of acquisition reform over the last decade. John P. White, Deputy Secretary of Defense, in a memorandum to the Secretaries of the Military Services, made the claim that O&P activities provide a means to achieve critical military objectives of maintaining a modern and ready force (10: Appendix 2). Success is measured in the ability to meet National Security Objectives with smaller budgets, a smaller force structure, continued readiness, and modernization (10:2).

The Department of Defense (DoD) Inspector General (IG), in a report titled *Contractors on the Battlefield* makes the following observation, “If contractors leave

their jobs during a crisis or hostile situation, the readiness of vital defense systems and the ability of the Armed Forces to perform their assigned missions would be jeopardized” (9:1). Cynthia Robertson, in research for USAF Air Command and Staff College (ACSC) poses the hypothesis that the DoD, in reaction to renewed emphasis on “reinventing government”, is making “the classic mistake of incongruity between military objectives and the national objectives” in implementing outsourcing initiatives (9:5).

## **Research Scope**

Public-Private competition, A-76, and Direct Conversion are the three processes that will be examined in this research effort. Public-Private competition is a grass-roots acquisition strategy whose genesis is business process improvement. It may involve new missions or it may include any activity where the Air Force believes there are opportunities for improvements to efficiency and cost. A multitude of businesses and government agencies can compete for the work. In this thesis, Public-Private competition at two Air Force depots will be examined and contrasted with COMPARE model. The A-76 process narrows the field by focusing on competition between an in-house (government) bidder and commercial organizations. Finally, the Direct Conversion process is simply one that allows organizations to streamline conversion in cases where only a limited number of positions are affected. The underlying criterion requires only activities with fewer than 10 employees be considered for this strategy.

With the exception of Direct Conversion, each of these strategies represents a considerable investment in time and money. Intangible costs, such as employee morale and disruption of work, are also prevalent.

## **Research Questions**

The following questions distil the purpose of this research into its most basic elements. Individually, the answers to these questions will provide insight into the important cost factors for each type of O&P initiative. Taken as a whole, they provide insight into the potential shortcomings of COMPARE when competitions become increasingly complex.

1. What are the baseline cost comparison factors established in COMPARE?
2. What are the common cost factors found in the Air Force Depot Public-Private competitions?
3. What are the similarities and differences between the cost factors established in COMPARE and those used in the Air Force Depot Public-Private competitions?
4. What explains the differences between the cost factors established in COMPARE and those used in the Air Force Depot Public-Private competitions?
5. What changes can be made to make COMPARE more robust in the comparison of more complex public and private entities?

## **Document Structure**

The literature review, presented in Chapter II, provides an in-depth examination of relevant literature and defines a focus for the reader regarding the questions posed in Chapter I. Chapter III develops the methodology from which to measure the validity of conclusions drawn from accomplished research. Data Analysis, Chapter IV, provides a

step-by-step breakdown of the cost factors under examination. Relationships between factors as well as significant differences will be identified and discussed. Chapter V presents a summary of research and results and offers conclusions and recommendations regarding the use of the COMPARE model.



## **II. Literature Review**

“Many argue that it is competition itself that reduces costs and improves service delivery, not whether a public or private sector entity ends up winning the competition” (19:Foreword).

### **Introduction**

This section is an overview of literature that is pertinent to the research questions posed in Chapter I. This section begins by providing a contextual framework to aid the reader in understanding the background and operating environment of Outsourcing and Privatization (O&P). Regulatory guidance for Air Force O&P implementation is then provided to further refine the direction of research. The section continues by providing both background and details regarding Public-Private competitions, A-76 studies, and the Direct Conversion process. A summary is provided to recap the highlights of the section.

### **Contextual Framework**

The study of any subject is incomplete without a solid understanding of its operating environment. For O&P, this environment is a labyrinth of policy and regulatory guidance designed to impress governmental intent upon those organizations charged with its execution. The following discussion provides a review of the O&P environment.

#### *Outsourcing versus Privatization*

Federal policy directs its departments to identify candidate organizations for O&P (13:1). While used interchangeably throughout both public and private documentation, O&P involves two very different constructs. Privatization involves “shifting the

production of a good or the provision of a service from the government to the private sector, often by selling government assets” (11). Outsourcing, on the other hand, involves the “transfer of a support function traditionally performed by an in-house organization to an outside service provider, with the government continuing to provide appropriate oversight” (12). The key difference is the complete divestiture of work or assets by the government during privatization.

#### *Privatization or Public-Private Competition*

In order to understand the context of the privatization/Public-Private competition question, it is important to be able to differentiate between them. Privatization assumes that the public sector will always be more efficient, more effective, or will provide higher quality goods or services than a government organization. Public-Private Competition makes no such *a priori* assumptions (3:51). In reviewing the history of A-76 implementation, this contextual distinction is helpful in determining the intentions of policy makers.

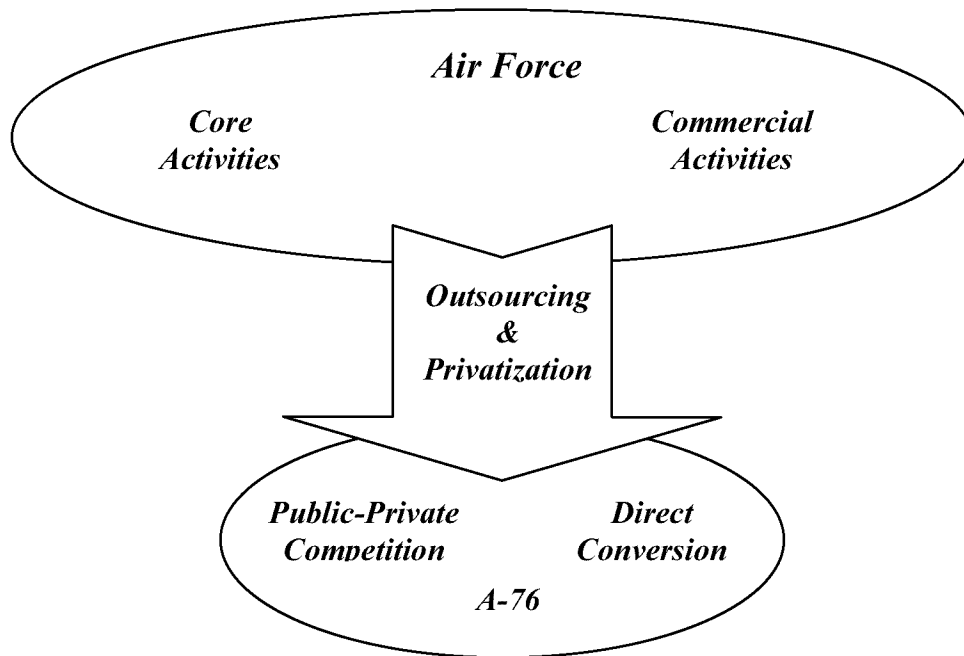
#### *The Outsourcing & Privatization Model*

The model in Figure 1 represents the relationship between different mechanisms for O&P. For the purpose of this paper, the Air Force will be divided in to two parts: Core Activities and Commercial Activities. Commercial Activities (CA’s) are candidates for O&P and can be divided into three sub-categories (13). These include Public-Private Competition, A-76, and Direct Conversion. Direct Conversion plays a minor role since it is generally limited to actions where there are fewer than 10 employees being considered

for outsourcing (1). Public-Private Competitions and A-76 comparisons, however, play a major role in the government's O&P agenda.

Many functions, such as combat operations or intelligence, are inherently governmental in nature. These activities, where it is in the best interest of the nation, are not candidates for performance by non-governmental employees and are considered to be Core Activities by the Air Force. Other activities, such as grounds maintenance or custodial work, are not inherently governmental and are considered candidates for outsourcing. This study will focus on CA's not considered inherently a governmental function.

Identification as a CA does not necessarily mean that an organization's mission or function will automatically be privatized or outsourced. Identification is simply the first step in determining the most cost effective and efficient manner in which to conduct business. The cost comparison may indicate that retaining the mission in-house, by uniformed military or government civilians, provides the most effective use of resources. Within this framework, there are two primary strategies for determining the most beneficial outcome. These include Public-Private competition and the A-76 process. A-76 refers to the Office of Management and Budget (OMB) circular A-76 (1). The following diagram details the relationships between the concepts discussed to this point.



*Figure 1- Outsourcing and Privatization Model*

#### *Exemptions to A-76*

The following activities have been identified as exempt from consideration for conversion (2:7):

1. Activities involving national defense or intelligence security.
2. Activities that perform patient care when needed to maintain a certain quality of direct patient care.
3. Core capabilities necessary to fulfill mission responsibilities or meet emergency requirements.
4. Recurring and severable activities that perform research and development.
5. No satisfactory commercial source is available.
6. Functions with 10 or fewer full-time equivalent (FTE) employees.

7. Activities where generally recognized industry performance and cost standards are not sufficient to meet governmental minimums.
8. Activities where it is more cost effective (as determined through a formal cost comparison) to perform in-house.
9. Temporary authorizations for in-house performance in the event of contractor default or termination.

### **Outsourcing and Privatization - Air Force Policy Directive (AFPD) 38-6**

Air Force Policy Directive 38-6 is the guiding policy for institutionalizing optimal use of private and public resources (13:1). In order to concentrate its resources in areas most directly linked to achieving its core competencies the Air Force has developed four goals for O&P and has integrated them into the Air Force Outsourcing and Privatization Strategic Plan. These goals are to sustain readiness, improve performance and quality, generate funds for force modernization, and focus resources on core missions (13:12).

The “vision” and “mission” in AFPD 38-6 include:

*Vision* – an Air and Space Force whose premier war fighting capability and corporate culture are inextricably linked to the optimum use of national resources (13:12).

*Mission* – to institutionalize the Air Force’s optimum use of public and private resources by selecting the best source, either internal or external, to meet Air Force Requirements (13:12).

AFPD 38-6 provides an excellent summation regarding the importance of O&P, “Because future capabilities of the Air Force depend so strongly on the success of O&P,

vigorous senior leadership involvement at all echelons of command and at all phases of this critical program is imperative” (13:14).

The preceding discussion prepares the stage for examining O&P mechanisms, and associated cost factors, in detail. By understanding national and Air Force intent for O&P, an individual is better prepared to identify the specific issues involved in identification of appropriate cost factors.

### **Public-Private Competition**

Of the three types of O&P mechanisms available, the Public-Private Competition (or Managed Competition) provides the broadest opportunity for organizations seeking the best value for the Government. The grass-root studies conducted for these competitions allow for the greatest expression of what constitutes a “best value.” Eggers espouses this benefit of managed competition because it allows the “widest possible range of competition between different types of providers and is the best way of ensuring high-quality services at the lowest price with guaranteed performance” (20:1).

According to Martin (19:7), over 30% of municipal and county governments nationwide are utilizing Public-Private competition. He further states that similar studies by the Council of State Governments highlight an increase in state departments and agencies. The trend, of capitalizing on competition, is also self evident at the national level, including within the Air Force where Public-Private competitions are increasingly implemented.

A major benefit to Public-Private competitions is that they are not limited to the less flexible categories outlined in A-76 procedures, though there is growing evidence

that hybrid actions, such as the Business Analysis conducted for the 89<sup>th</sup> Airlift Wing (Andrews AFB), are gaining support. At Andrews, a waiver for A-76 procedures was approved to allow inclusion of several non-standard cost factors to be used in the COMPARE model.

### *Definition*

Martin defines Public-Private competition in this way, “government procurement and quasi-procurement type situations in which the public sector competes with the private sector to provide government services” (19:7). He further states that “Public-Private competition is a maturation of privatization and contracting out (outsourcing) initiatives” as discussed earlier in this section.

### *Forms of Public-Private Competition*

Martin further explains his understanding of Public-Private competition by breaking it down into three distinct forms. These include the Ad-Hoc Approach, Informal Bidding, and Formal Bidding (19:7). The Ad-Hoc Approach refers to a situation where public sector service delivery is simply compared to private sector service delivery. Informal Bidding is the process by which the public sector submits informal bids or proposals that are compared to formal bids and proposals submitted by the private sector. Finally, Martin discusses Formal Bidding, the process whereby the public sector submits formal bids and proposals that are compared with formal bids and proposals submitted by the private sector.

## **Ensuring a Level Playing Field in Public-Private Competition**

An underlying assumption of the O&P effort is the idea that competition will reduce costs and improve service delivery. An important economic assumption associated with competition is that there are many sellers (22:57). Many sellers, in theory, cause prices to be driven to a fair market value. This fair market price is the price that the government seeks to receive in any transaction, contract, or competition it is involved with.

The concept of competition is critical to discussions regarding O&P mechanisms and their associated cost factors because if the factors are perceived as unfair, potential bidders will be reluctant to expend the necessary resources to participating in competitions. According to Dr. Lawrence Martin, “Depending on where one sits, there is wide disagreement about whether the ‘playing field’ is tilted to one sector or another” (19:4). William Eggers, Director of Privatization and Government Reform at the Reason Public Policy Institute, supports this view in stating, “increasingly, private providers are crying foul, arguing that the playing field is usually tilted against them in Public-Private competitions” (20: Executive Summary). He further emphasizes the necessity for competitive neutrality, “A competitively neutral competition policy requires that in-house units of government should not enjoy a net competitive advantage over their private-sector counterparts simply by virtue of public-sector ownership. At the same time, to the extent possible, institutional constraints that hamper the public-sector unit’s ability to increase productivity, and therefore effectively compete with the private sector, should be eliminated” (20:Executive Summary).



Paul Meyer, Executive Director of the Consulting Engineers and Land Surveyors of California (CELSOC) adds reality to the picture in his statement “ Leveling the playing field may sound fine in theory, but in practice it just never happens. In actual fact, we have never witnessed a single example of a truly level playing field involving public and private-sector competition” (20:2). Michael Gagliardo, Executive Director of the Urban Water Institute of the U.S. Conference of Mayors, adds to this claim in saying “While you can’t get to a 100% even playing field, you can get close” (20:2).

### *Major Level Playing Field Issues*

In trying to level the field in terms of Public-Private competitions, Both Martin and Eggers have outlined factors that they consider important in conducting a fair evaluation. Alan Laverson adds his insights in the very focused area of overhead rates. These factors provide our first look at the types of cost factors we should seek when evaluating the cases in this study.

Martin provides numerous ideas that pertain to achieving a level playing field. Of particular importance to this research are the following highlights.

1. Mandated Private Sector Wage Scales – Inclusion of artificial wage scales causes the public sector to be more competitive because they do not have the same incentive to improve service quality or reduce cost as a private entity (19:12).
2. Mandated Private Sector Employee Benefits – For similar reasons as the mandated wage scales, mandated benefits tilt the field in favor of the public sector (19:14).
3. Minimum Cost Savings Thresholds – This advantage is significant to the public sector and is especially true when large dollar competitions are involved. On top of achieving efficiencies to meet the public entry, a private firm must add profit. An additional 5% or 10%, due to thresholds, can be a significant barrier to entry (19:14).

4. Cost Comparison Approach – Martin claims this to be the most critical of the leveling issues. The problem is that choice of methodology determines what public sector costs will/will not be included in the analysis. Two types are typical. These are the “fully allocated” approach and the “avoidable cost” approach. Martin recommends a hybrid approach whereby unavoidable costs of public sector delivery are added to the cost of private sector delivery. This “Texas” approach results in a competitively neutral position (19:14-15).
5. Transition Costs – These are one time conversion costs and should be added to the cost of delivery for the current non-performing competitors (19:15).
6. Contract Administration and Monitoring Costs – This type of cost includes all activities that are involved in the oversight, management, or administrative needs of service delivery (19:16).
7. Penalties for Public Sector Failure to Perform – Like risk and the associated liability found in a private sector contract, there should be provisions to level the field for the public entry for failure to perform contractual work (19:17).

#### *Advantages and Disadvantages*

Eggers provides the following list of advantages and disadvantages that are inherent in government bids (20:2). The cost factors of interest are at the root of these items.

- Public Advantages
  1. Public entities enjoy a lower cost of capital.
  2. Public entities pay little or no taxes.
  3. They don't have to earn profit, rate-of-return on investments, or depreciation expenses.
  4. They have first hand knowledge of operations.
  5. Public entrants enjoy sovereign immunity/indemnification.
  6. Public organizations are typically self insured.
  7. They are usually exempted from some laws and regulations.

8. Situations arise where there are close relationships with the staff evaluating bids.
- Public Disadvantages
    1. Regulatory guidance imposes unusually inflexible work rules.
    2. Public entities have to bid cost with little benefit from accurate accounting data.
    3. Public agencies are subject to rigid procurement and personnel rules.
    4. They experience higher employee benefit levels. This is differentiated from Martin's previous statement that mandated benefits tilt the field in favor of the public sector. Martin's point is that there is no flexibility in achieving efficiencies when benefits are dictated to a private offeror.
    5. They lack direct access to capital markets.
    6. Public entities face constitutional and statutory constraints.
    7. They have less economies of scale.
    8. They cannot move quickly on capital spending.

### *Overhead Rates*

In his dissertation, *A Study of Overhead Rate Behavior at a U.S. Air Force Base in the Context of A-76 Competitions* (1999), Laverson provides very specific focus on overhead rates as they apply to outsourcing decisions. He states; "Overhead costs can be a significant factor when deciding if a commercial activity can be performed more economically by a contractor or the government" (21:13).

Laverson's work is pertinent to this research because the 12% "default" overhead rate used in COMPARE has no analytical basis to support it (21:25). The COMPARE software (and associated guidance) makes provisions for use of a different rate, though this option is seldom exercised. This critical cost factor plays a large role in the bid amounts of private entities but is defaulted to 12% for public entrants. If this rate is

inaccurate, in-house estimates will be overstated when their actual rates are lower (21:25). The converse is equally true. Given the established DoD goal to conduct A-76 competitions involving more than 170,000 positions from 1999-2005, the mistake of erroneous outsourcing decisions could result in the loss of tens of millions of dollars (21:25).

Laverson provides a telling example in relating a story whereby the General Accounting Office (GAO) asked the Air Force to analyze 33 competitions (1990-96) that were won by public entities. The analysis determined that 12 of the 33 would have been won by the private sector had the 12% rule been in effect (21:26). This is significant considering the dubious basis for the 12% value. Incorrectly assessing overhead is a factor that cannot be overlooked when discussing a level playing field.

### **OMB Circular A-76**

OMB Circular A-76 - Performance of Commercial Activities, and its antecedent Bureau of the Budget (BOB) documents, is the manifestation of Federal policy on the conduct of Commercial Activities (3:51). Federal policy on the conduct of Commercial Activities can be summarized into the following basic principles (1:1-2).

#### *Commercial Activities Principles of Conduct*

Achieve Economy and Enhance Productivity. A fundamental truth in business is that competition spawns improvement in efficiency and productivity. When the government performs a function in-house, it is operating in a competition-free

environment. By introducing competition, via the commercial sector or other government agencies, significant savings can be achieved.

Retain Governmental Functions In-House. There are certain functions of government that must remain separate from the commercial domain. It is in the best interest of a nation to maintain armed forces, as an extension of its ability to enforce policy, free from business motives of commercial enterprise.

Rely on the Commercial Sector. Whenever an activity or service is determined to be non-inherently governmental, it becomes a candidate for outsourcing to the commercial sector. The assumptions made on the achievement of economy and enhancement of productivity now come into play.

#### *Government Perspective*

In order to understand the current environment of A-76, it is important to understand the perspective with which the Government views its place in separating operational capability from support roles. The following paragraphs will facilitate this understanding.

“In the process of governing, the Government should not compete with its citizens” (1:1). The Federal Government has long recognized the need to balance the interests of national security with the need to operate in an efficient, businesslike manner. To this end, and with varying degrees of success, it has made a distinction between the functions it performs, which are inherently governmental, and those that are not. This determination rests on a number of factors, including the level of Federal control

required, the nature of the function performed, statutory provisions, and the distinction between oversight and recurring operations (2:3).

An inherently Governmental function is one that is “so intimately related to the public interest as to mandate performance by Government employees” (1:2). Functions that are determined not to be inherently governmental are candidates for outsourcing, through private contract or Inter-Service Support Agreement (ISSA).

### **A-76 Process**

Once an activity has been identified as non-inherently governmental, it becomes a candidate for outsourcing to a commercial enterprise or another governmental organization. A formal cost comparison is used to determine if it is more cost effective to retain an activity in-house or to contract with a private entity or other government agency through an Inter-service Support Agreement (ISSA). CIRCULAR NO. A-76 Revised Supplemental Handbook governs conduct of the cost comparison. The process can be divided into six major components (2:10).

#### *Components of the A-76 Process*

1. Development of a Performance Work Statement (PWS) and Quality Assurance Surveillance Plan (QASP)
2. Determine the Most Efficient Organization (MEO)
3. Determine the In-House Cost Estimate
4. Develop a Request for Proposal (RFP) or Invitation for Bid (IFB)
5. Conduct the Cost Comparison
6. Administration of the Appeals Process

The PWS specifically defines the work performed and output produced by a Commercial Activity. It serves as the most basic means of comparison between competing activities. The QASP identifies the measures of merit by which the MEO or contract performance will be measured once awarded. The MEO is the organization that will become the government competitor in any cost comparison. It represents the governments best effort in meeting the requirements set forth in the PWS and capitalizes on all possible efficiencies in order to be competitive with the private sector.

The IHCE is summation of all MEO operating costs. It provides the basis for the government bid in the Cost Comparison step. The mandatory costing software for DoD Components is COMPARE (4:17). In the Request for Proposal (RFP) / Invitation for Bid (IFB) step, the initiation of the actual solicitation for bids to commercial entities occurs. Potential contractors use the PWS to develop their responses. These become the basis for their bid during cost comparison.

Once both the in-house (MEO) bid and top contractor bit are available, they are evaluated to determine the winning bid. COMPARE prepares the Cost Comparison Form (CCF) used in making the cost comparison decision. It is important to point out competing entities must beat the MEO bid by a minimum cost differential based on 10% of the MEO direct labor cost or \$10 Million (2:28).

Parties who want to challenge the cost comparison have the opportunity to appeal the decision. Several criteria must be met before the Administrative Appeal Authority will review the decision (5:55,58). In identifying these exempt activities, the Federal government is able to adhere to the following stated policies: Achieve Economy and

Enhance Productivity, Retain Government Functions In-House, and Rely on the Commercial Sector (1:2).

### **Direct Conversion**

Direct Conversion is simply a streamlined method to allow conversion of workload to in-house, contract, or Interservice Support Agreement (ISSA), without conduct of a cost comparison. Conditions for use of Direct Conversion require that only activities with fewer than 10 full-time equivalent (FTE) employees be eligible and that all offerors are able to provide required levels of service quality at fair and reasonable prices (2:4).

### **Chapter Summary**

In the preceding sections we developed a knowledge base to draw upon during the conduct of further research. These sections are relevant because they build the framework with which to begin evaluation of cost factors that were developed in Ensuring a Level Playing Field and Considerations. We established a frame of reference in Contextual Framework and provided a summary of regulatory guidance in the AFPD 38-6 section. Finally, applicable theory, definitions, and processes of each of the three O&P mechanisms were provided. With this background, we will proceed with discussion of the methodology used in the development of these studies.



### **III. Methodology**

#### **Introduction**

This chapter focuses on the methodology that will be used to measure the validity of conclusions drawn from accomplished research. Chapter III starts by distinguishing between qualitative and quantitative methods used to achieve validity. The Case approach is the qualitative method followed in this thesis. The appropriateness of this method is justified in following discussions. Chapter III then expands into explanation and validation of the design process to be used. In this effort, individual cases will be examined then cross-case conclusions will be drawn to meet demands of the research questions stated in Chapter I.

#### **A Case for Qualitative Methods**

##### *What is a Qualitative Method?*

“The label qualitative methods has no precise meaning in any of the social sciences. It is at best an umbrella term covering an array of interpretive techniques which seek to describe, decode, translate, and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world” (15:9).

In beginning a chapter with this statement, there is an implication that qualitative research methods must be defended in order to gain support of the research. In

*Qualitative Methodology*, editor John Van Maanen supports this claim. Maanen postulates, “since quantitative methods have held an almost monopolistic grip on the production of knowledge in the field, any serious reflection regarding current theory must at some point consider the value of alternative methods” (15:11). He further asserts, “there is a growing concern about where quantitative techniques are carrying us” (15:11). In this, he implies that quantitative research procedures have become so “ritualized” that there is a disconnect between what is being measured and the concept under study (15:11).

Mintzberg, in an essay titled *An Emerging Strategy of “Direct” Research*, provides additional support for the claims of Van Maanen. He states, “Too many of the results have been significant only in the statistical sense of the word. In our work, we have always found that simpler, more direct methodologies have yielded more useful results” (15:107).

### **Designing a Research Strategy**

Many different research strategy options exist for a research effort. Robert Yin lists five specific types for consideration (6:6 – Figure 1.1). These include: the experiment, a survey, an analysis of archival material, a study of historical material, and a case study. Each can be evaluated for their proper relevance based on the research objective. When choosing a strategy, the researcher must identify the form of question being pursued. “In general, case studies are the preferred strategy when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (6:1).”

## Methodology

Having supported the validity of the case study, this methodology has been selected it as a reasonable approach to provide support for the research questions posed earlier in Chapter I. With this determination comes a series of further questions that must be answered in order to define the specifics of the design process.

### *Design Construct*

There are many different designs that must be considered before deciding on a particular one. Each is suitable for different situations. There are single and multiple cases as well as Holistic and Embedded designs. Yin summarizes these relationships in the following table (6:39).

*Table 1 – Basic Design Types*

	<b>Single-case designs</b>	<b>Multiple-case designs</b>
<b>Holistic (single unit of analysis)</b>	TYPE 1	TYPE 3
<b>Embedded (multiple units of analysis)</b>	TYPE 2	TYPE 4

The distinction between single-case and multiple-case design (columns) simply delineates how many cases are going to be used to address the research questions (6:39). The row headings “holistic” vs. “embedded” distinguish between single and multiple units of analysis within a case (6:41).

### *Multiple-Case – Embedded Design*

For this research, the Multiple-Case – Embedded design is the most suitable. It allows for the comparison of three separate cases to ascertain the thesis objectives. A single case would allow no basis for comparison and the global nature of a holistic design does not lend itself to the low-level examination of cost factors that must be accomplished. The primary advantage of multiple case analysis is that the analysis is considered more robust and the results more compelling than with a single case effort (6:45).

In conducting a multiple case analysis, replication, rather than statistical sampling, is of importance. The distinction is in the logic behind replication of an event rather than the logic prescribed to statistical sampling. If, in the course of an experiment a prediction is made and then bears true in multiple cases, replication is evident (6:45). Sampling logic involves the theory whereby outcomes of the entire pool of cases can be predicted through the representation of a few cases.

An item of concern in this study is the lack of suitable cases to examine in order to show literal replication. In a literal replication, identification of similar results in each case is the goal. In this study, the concept of theoretical replication will be used instead. The two depot cases represent 40% of the USAF depot base (2 of 5). Addition of the baseline case – the COMPARE model, provides an excellent yardstick since all A-76 studies (barring rule changes) have been, or will be, completed using its construct. Examination of these three cases provides a sufficient base to identify contrasts between them. Furthermore, the reasons for the different cost factors in each should be explicable and therefore predictable. This is theoretical replication as defined by Yin (6:46).

## Summary of Design Process

In observance of the aforementioned criteria for developing a case study, the following model will serve as the basis for conducting the case study analyses necessary for this thesis. In brief, each case will be developed separately, and then the cross-case conclusions will be drawn. A final report will then provide the cross-case conclusions.

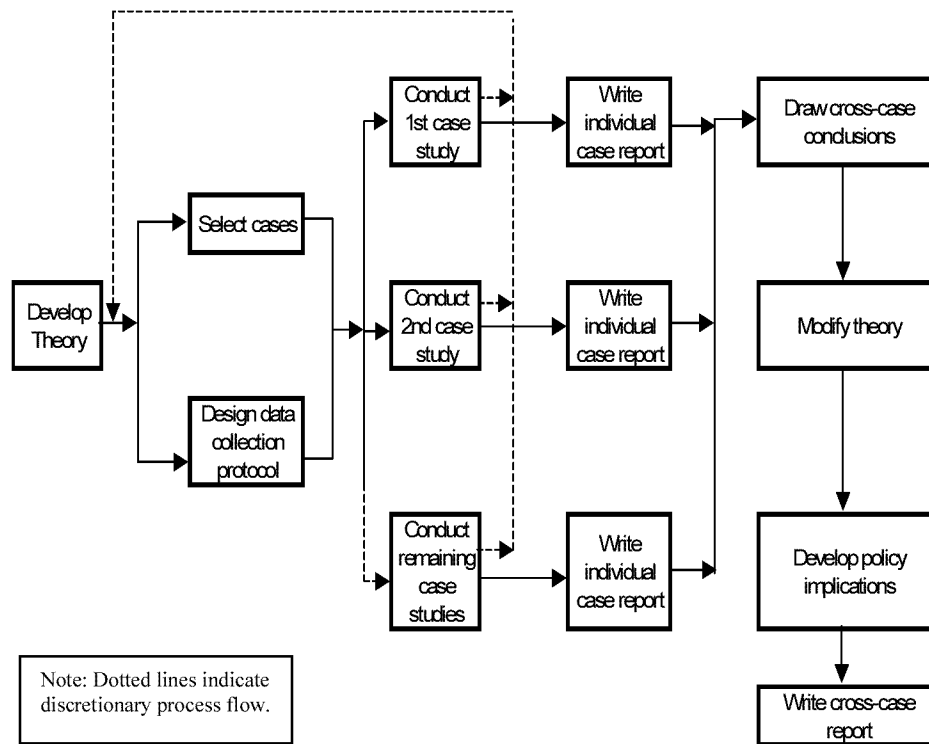


Figure 2 – Basic Design Types

### *Theory Development*

In this report, the research questions posed in Chapter I serve as the guiding influence. Here, the research objective is to provide defensible responses to each question rather than prove or disprove a hypothesis and associated theory.

### *Case Selection*

Three cases have been identified for this study. The COMPARE model (Case 1) serves as a baseline for cost factor comparison. It is highly standardized and represents a stable platform with which to evaluate the similarities and differences of cost factors found in the remaining two cases. All competitions using standard A-76 procedures can be represented by this model.

Cases 2 and 3 were selected as representative of having relatively extreme examples of cost factors that might be encountered during Public-Private competition. It is important to mention that these cases had the significant benefit of complete and accessible data with which to evaluate. The C-5 Business Area Competition, held at the San Antonio Air Logistic Center (SA-ALC), Kelly AFB, Texas comprises Case II. Case III is from the Sacramento Air Logistics Center (SM-ALC), McClellan AFB, California, Workload Competition.

### *Data Collection Protocol*

Case I will serve as the base line in development of data collection procedures. The COMPARE software and associated regulatory guidance will be examined to identify the core cost factors involved in completion evaluation. Each of the remaining cases will be examined to reveal their critical cost factors. Rationale behind the different factors and their relationships to the total evaluated cost of the bid will be evaluated.

### *Case Conduct, Reporting, and Cross-Case Conclusions*

Each case will be analyzed separately to identify the cost factors that are associated with computation of the bids total evaluated cost. Individual reports will also

be prepared for each. The cost factors identified in Cases II and III will then be analyzed for commonalities and differences. Finally, each factor will be matched to its related factor in the Case I benchmark. Unmatched cost factors will be highlighted and will serve as the response to the third research question. A final cross-case report will serve as the basis for answering the final research question.

### **Critical Aspects of Research**

In any research design effort, there are several standards that must be met to validate a study. Yin combines these into four critical aspects of any research design effort (6:32-33). These include:

1. Construct Validity
2. Internal Validity
3. External Validity
4. Reliability

Each is a measure of the quality of the research being presented and serves to strengthen the position of the study logic. A summary of these tests and associated implementation tactics is provided by Yin (6:33 – Figure 2.3).

*Table 2 – Case Study Tactics*

<b>Tests</b>	<b>Case study tactic</b>	<b>Phase of research in which tactic occurs</b>
<b>Construct validity</b>	<b>Use multiple sources of evidence</b>	<b>Data collection</b>
	<b>Establish chain of evidence</b>	<b>Data collection</b>
	<b>Have key informants review draft case study report</b>	<b>Composition</b>
<b>Internal Validity</b>	<b>Do pattern-matching</b>	<b>Data analysis</b>
	<b>Do explanation-matching</b>	<b>Data analysis</b>
	<b>Do time-series analysis</b>	<b>Data analysis</b>
<b>External Validity</b>	<b>Use replication logic in multiple-case studies</b>	<b>Research design</b>
<b>Reliability</b>	<b>Use case study protocol</b>	<b>Data collection</b>
	<b>Develop case study data base</b>	<b>Data collection</b>

### *Construct Validity*

The concept of construct validity refers to the establishment of operational measures for study topics (6:32). Construct validity involves ensuring that there are multiple sources of proof for the data being used. In this study, the data used for Case I is supported by regulatory guidance that is widely available in the public domain. Data for Cases II and III carry slightly less weight than that of Case I due to the lack of formal procedures for record keeping but is augmented by the existence of the Cost Comparability Handbook (26) as a standard reference. The validity of the source



documents for these cases also comes from the numerous collaborating documents and briefings where the figures were presented.

### *Internal Validity*

Internal validity refers to the establishment of causal relationships in a study. Pattern-matching, explanation-matching, and time-series analysis are the tools for ensuring internal validity. These are used in explanatory or causal studies and are not applicable to this effort (6:32).

### *External Validity*

External validity is achieved through replication logic in multiple case studies. It refers to the parameters where research results can be generalized. Case I is an example where absolute replication is possible. Procedures are highly standardized and results are predictable. The limited number of cases to draw upon serves as a barrier for establishing external validity in the two depot cases. Even so, it is reasonable to conclude that similarities in cost factors between Cases II and III would allow a comfortable degree of predictability in the event any of the remaining air force depots were targeted for an O&P effort. Both depots were structured similarly and were subject to the same regulatory guidance in performance of activities. Environmental or geographical differences that separate the two depots are factors that can be predicted. It is important to remember that the thrust of this research is to identify the differences between the depot competitions and the baseline COMPARE model.

### *Reliability*

Reliability is the property that will allow others to repeat the work contained in a research effort. Reliability is achieved through consistent application of case study protocol. In this study, the protocol followed is the Multiple-Case – Embedded Design discussed earlier in the chapter. Each case will be conducted according to the model provided in Figure 2.

### **Chapter Summary**

The appropriateness of the case methodology, and associated design process, used in this research effort should now be established. The design process and adherence to the standards established for validity (construct, internal, and external) and reliability should provide confidence in the conclusions that will be identified in subsequent sections.

## **IV. Data Analysis**

### **Overview**

In accordance with the methodology described in Chapter III, the three target case studies are now presented. Case I will serve as the baseline for review of cases II and III. Each case analysis will consist of an overview, followed by cost factor identification and description. Upon completion of the individual cases, cross-case conclusions will be drawn. Before analyzing individual cases, a review of source selection activities will be presented to refine the context of the individual cost factors that are the focus of this effort.

### **Source Selection Activities**

To conduct a comparison of A-76 and Public-Private competitions, it is helpful to first break down the source selection process into its most basic units. These are: Pre-Solicitation Activities, Evaluation Activities, and Award Activities. In order to show the proper context of cost factors within the source selection process, a side-by-side comparison model is also provided.

#### *Pre-Solicitation Activities*

Prior to an Outsourcing and Privatization initiative, there are several pre-solicitation activities that take place. For the A-76 competition, a commercial activities inventory starts the process. A commercial activities inventory is a formal list submitted to the Office of Management and Budget (by agency) detailing all commercial activities

performed by in-house employees. The inventory serves as the basis for identification of candidates for O&P initiatives. For Public-Private competitions, acquisition strategy planning is the genesis of an O&P initiative. Acquisition strategy planning begins with the identification of an unfulfilled requirement, mission need, or a planned/directed change in business practice.

Next, each process conducts planning to outline the scope of the O&P activity under consideration. In the A-76 process, a performance work statement (discussed in Chapter II) is created, while in the Public-Private competition, source selection planning is accomplished. Source selection planning includes identification of relevant factors and associated levels of relative importance, schedule projections, and demonstrated traceability between program risk and performance thresholds.

Finally, each process results in either a Request for Proposal (RFP) or an Invitation for Bid (IFB). The RFP and IFB provide prospective suppliers the basis upon which to build a realistic and reasonable proposal. Basis for Award and Evaluation Criteria and other evaluation factors (past performance, mission capability, risk, and cost/price) are included.

#### *Evaluation Activities*

Each type of O&P initiative involves an evaluation process, which allows for comparison of cost factors. It is in this step that the primary thrust for this research effort resides. In the A-76 process, the final comparison is made between one public bidder and a single private bid. The private bid has been identified as the lowest cost, responsive bid from all private entrants (down selected). In the Public-Private process, the government

bid is evaluated against all responsive and reasonable public bids to determine the best value.

Evaluation also involves activities that are designed to level the playing field among interested parties. Two of these elements include a Technical Evaluation and a Risk Analysis. A technical analysis evaluates the bidders ability to meet objective and performance requirements. Focus of this evaluation is on the strengths and inadequacies of an offerors proposal (23:2). Risk Assessments are conducted to identify risk associated with scheduling, proposal approach, and past performance (23:3-4). The A-76 process relies upon previously discussed assumptions of competition (Chapter 2) to minimize risk while the Public-Private competition relies on several formal studies to determine appropriate levels and types of risk.

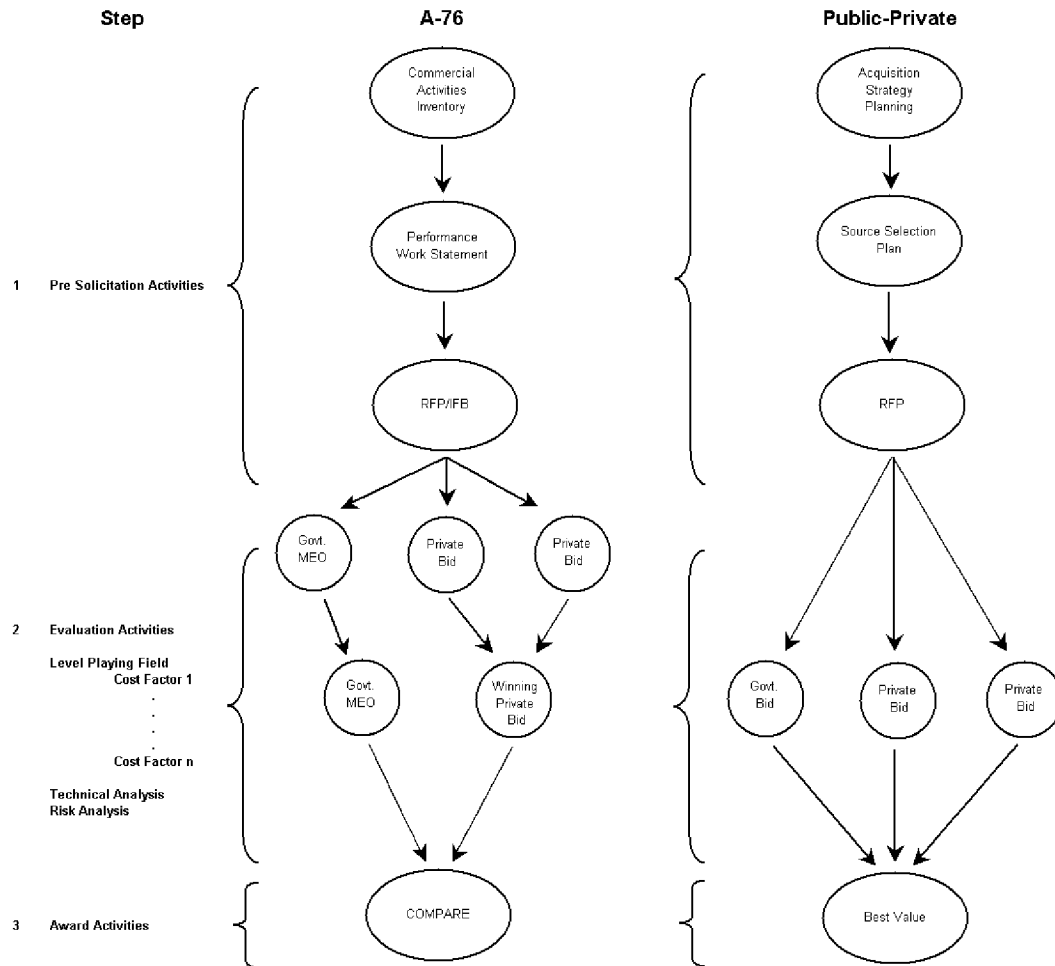
#### *Award Activities*

Award Activities in each process involve several key steps. There is a decision briefing, comprised of pertinent information and criteria, to aid the source selection authority in making an award decision. Considerable effort is also expended in documenting the evaluation and analysis of entrants. Finally, open and frank communication, in the form of debriefings, is encouraged with entrants.

#### *Outsourcing and Privatization Activities Comparison Model*

The following diagram depicts these O&P activities. The model is not presented as all-inclusive, but provides a general understanding of each process, inception to implementation, and allows comparison of the different levels or activities involved in

each. A general understanding of the Pre-selection and Award Activities helps put into context the thrust of this thesis.



*Figure 3 - Outsourcing and Privatization Activities Comparison Model*

### **Case I - Cost Factors for A-76 (COMPARE)**

#### *Case Overview*

The purpose of this case is to establish an evaluation benchmark for Cases II and III as well as to answer the first research question posed in Chapter I: “What are the

baseline cost comparison factors established in COMPARE?” Information contained in this analysis is drawn from the COMPARE software as well as the A-76 Costing Manual (4). The cost factors identified should be considered applicable to any A-76 action since COMPARE is the only authorized cost model.

### *Cost Factor Identification*

The factors involved in calculation of the in-house (public) bid form the basis for comparison with the private bids received. The public bid must include all applicable factors in its submission. In the model, specific line items from private bids are entered into COMPARE to allow comparison to the public bid and identification of the lowest bidder. The following 18 categories represent the top-level factors included in COMPARE. Each is broken down into its subcomponents where appropriate. It is important to note that COMPARE leaves latitude for custom factors in many of the categories.

- Personnel Costs. Personnel Costs include the cost of all direct in-house labor and supervision. Work tied to quality control, administration, and inspection of any support contracts involved, is also included. Fringe benefits, overseas allowances and other entitlements also comprise this list. Care must be taken to ensure the proper inflation factors are used over the performance period (4:23-44).
- Materials and Supply Costs. Raw materials, parts, subassemblies, components and offices supplies are included in this figure. Only those costs directly attributable to performance of the MEO may be included. If an item will be provided as Government Furnished Equipment (GFE) it should not be included as a cost to the

MEO since it is then neutral as far as competition is concerned. In preparation of MEO material and supply costs, care should be taken to ensure that any previously shared expenses are properly prorated (4:45-49).

- Depreciation. Depreciation represents the cost of ownership and the consumption of an asset's useful life. In the A-76 process, only those items with an acquisition cost of greater than \$5,000 are depreciated. The costs of shared items are prorated to the MEO based on the estimated percentage of use. The depreciable base used for cost calculations is based on the asset's acquisition cost (including transportation and installation) plus the cost of capital improvements less its disposal/residual value. Useful life can be determined by the factors in Appendix 8 of the A-76 Costing Manual or by local engineering estimates (4:50).
- Cost of Capital. Cost of capital is an assigned charge on the Government's investment in capital assets used in providing the product or service of the MEO. As with depreciation, this charge applies to assets valued at \$5,000 or greater. Assignment of this charge is necessary only when the MEO acquired an asset within two years prior to the cost comparison date or is a planned acquisition during the performance period. The basis of computation is the same cost basis used for depreciation multiplied by rates found in Appendix 5 of the Cost Manual. If the asset is shared, the previous product is multiplied by the appropriate percent of usage (4:54).
- Rent. Rent includes any costs incurred for the use of land, buildings, space, machinery or capability by the MEO. Vehicles and equipment rentals are most common for the MEO. If the government is providing facilities or land to all bidders



(i.e. GFE), associated rental costs are not included in the cost comparison. Prorating expenses among shared rental items is expected (4:60).

- Maintenance and Repair. This cost is incurred to keep buildings and equipment in normal operating condition. The cost of capital improvements is not included (4:60).
- Utilities. Any charges for telephone, electricity, water, waste management, etc. are included in this cost factor. Costs are allocated or metered as appropriate to capture applicable charges and adjustments should be made for anticipated changes to expenses. The government has typically found it more cost efficient to furnish utilities were possible (4:61).
- Insurance. Insurance provides protection from risks and associated costs from any potential property loss or liability claims that might arise during the conduct of an activity. The government is self insured, while a private bidder must acquire insurance at additional expense. To level the field, the government calculates equivalent costs for its assets and personnel. If the government furnishes equipment, the associated insurance need not be calculated unless specifically assigned in the solicitation (4:62).
- Travel. Travel expenses incurred as part of developing the PWS or generated in developing and operating the MEO must be included in the cost comparison evaluation. Costs for travel can be easily calculated from budgeted amounts of the commercial activity under review or by MEO estimate (4:63).
- MEO Subcontracts. The cost, to the MEO, of any subcontracts must be included in the evaluation. Additionally, COMPARE computes an appropriate deduction for Federal income taxes. This offsets potential revenue to the government from income

taxes. Costs are not limited to those services acquired through subcontracts. Costs incurred for services purchased by a Government purchase card (e.g. International Merchant Purchase Authorization Card – IMPAC) must also be included (4:64).

- Other Costs. COMPARE makes provisions for inclusion of any other cost factors that are pertinent to the cost comparison. “Other costs” should include the cost of items that are valued at less than \$5,000 and are not immediately consumed by the MEO. Office furniture, projectors, and tools fall into this category (4:65).
- Overhead Costs. The MEO is automatically charged an overhead rate of 12% of the personnel costs discussed earlier. This charge is used to allocate overhead costs that are not necessarily visible to the commercial activity. A lack of specific overhead costs is due to a lack of a viable cost accounting system such as Activity Based Costing (ABC). Waivers to this policy are permitted if an agency can produce credible evidence that a different rate is appropriate. The charge of an appropriate overhead rate is of major importance to both public and private competitors. The public bidder does not want to be unnecessarily burdened with a rate that overstates true costs, nor does it want to be held hostage to government constraints against the liquidation of assets that it is subject to. The private bidder seeks to ensure that the public bidder does not realize an unfair advantage because its overhead costs are buried in part of a larger, unrelated, organization. Failure to include overhead costs would significantly lower the cost of the MEO (4:68).
- Additional Costs. This category allows for cost factors that are not otherwise properly classified in previous sections. Items such as transition expenses, conversion costs, and office/plant rearrangements are included in this line item. Any

new requirements, resulting from creation of the MEO, should be included here (4:70).

- Contract Administration Costs. The costs discussed to this point have been added to the cost of the MEO. Contract administration costs are added to the cost of the private bidder or ISSA contestant. The purpose of this category is to account for the additional cost of contract inspection, quality assurance evaluations and other administrative expenses that are new to the government as a result of a private entity being awarded the bid (4:75).
- One-Time Conversion Costs. Any conversion, whether public to private or private to public, involves one-time costs related to that conversion. COMPARE recognizes the following three categories: Labor, Material, and “Other” one-time conversion costs. Labor costs include severance pay, retraining costs and relocation expenses. Costs included in the material category are those such as the conduct of a joint inventory and the associated cost of transfer of ownership or responsibility. The last category is open to allow inclusion of costs such as accomplishing new background checks and security clearances (4:80).
- Gain on Assets. In developing an MEO, an agency may identify capital assets that are now excess to requirements. The cost of disposal or transfer of assets is based on a decision of economic advantage to the taxpayer. If the cost of transfer of disposal exceeds the book value of the asset, the losses are not assessed against the private/ISSA offer. Only items that are deemed excess, but not made available to the private/ISSA bidder are assessed this charge (4:84).

- Federal Income Tax Deduction. Award of a contract provides a source of revenue that is subject to Federal income tax. This tax reduces the Governments net cost of contracting by generating revenue to the Government for the portion of the contract price subject to Federal income taxes. Unless an offeror is a tax-exempt entity, this deduction is made (4:87).
- Minimum Conversion Differential. The minimum conversion differential represents a compilation of intangible costs that is applied to the incumbent service provider. The differential is the lesser of 10 percent of personnel costs or \$10 million over all the contract performance periods in the solicitation. This minimum was established to protect the government from conversions where there are only marginal estimated savings. Examples of the factors considered in the differential are things such as morale, disruption, and other factors not specifically included in the in-house estimate (4:89).

## **Case II – C-5 Business Area Competition, SA-ALC**

### *Case Overview*

This case represents the first of two Public-Private competitions that will be examined. This case centers on the C-5 Programmed Depot Maintenance (PDM) and Speedline programs, performed by the C-5 Business Area, at the San Antonio Air Logistics Center (SA-ALC) at Kelly AFB, Texas. The Speedline program refers to the Time Compliance Technical Order (TCTO) activities conducted to ensure readiness of the C-5 aircraft (24:3). The competition is a result of a June 1995 Base Realignment and

Closure Commission (BRAC) decision to determine where future workload would be performed (24:2).

### *Cost Factor Identification*

Three primary criteria were established to allow evaluation and comparison of the costs of bids received. These were completeness, realism, and reasonableness.

Completeness of bids was evaluated by assessing the level of detail the offeror provided in cost information required by the RFP (25:6). Realism was evaluated by assessing the compatibility of proposal costs with proposal scope and effort (25:6). The reasonableness of a bid consisted of evaluating a bid through cost or price analysis techniques (25:6). The Reasonableness Analysis establishes the starting point for our analysis of cost factors in this case.

The following table identifies the factors used for evaluation of the C-5 competition. The factors are grouped into four categories: Recurring Customer Costs, Comparability Adjustments, Department of Defense (DoD) Adjustments, and Strengths, Weaknesses, and Risk. Recurring Customer Costs indicate those items that can readily be compared across competing organizations over the life of the contract. Comparability Adjustments refer to those items that are necessary to make costs between different Services or public entities comparable (26:11). DoD Adjustment factors represent overall costs or savings to the DoD that must be considered over the life of the contract. The Strengths, Weaknesses, and Risk category highlights cost factors that are designed to capture a dollar equivalent of historically intangible benefits and risks that arise in conduct of assessing and quantifying the strengths, weaknesses, and risk associated with

an offeror. Examples include assessments from the Performance Risk Assessment Group (PRAG) or technical risk assessments from the Source Selection Evaluation Board (SSEB) Technical Team. This process will be referred to as “dollarization (24:42)” in the remainder of this document. Note that the Warner Robins bid served as the public offer rather than the incumbent SA-ALC (due to BRAC decision).

*Table 3 – Case II Cost Factors*

<b>Warner Robins</b> <b><u>Cost Element</u></b>	<b>McDonnell Douglas</b> <b><u>Cost Element</u></b>	<b>Lockheed Martin</b> <b><u>Cost Element</u></b>
	<b>Recurring Customer Costs</b>	
Direct Labor	Direct Labor	Direct Labor
Direct Material	Direct Material	Direct Material
Other Direct	Other Direct	Other Direct
Production OH	Production OH	Production OH
G&A	G&A	G&A
C-5 Overhead Rate Adjust	Profit	Profit
	<b>Comparability Adjustments</b>	
State Unemployment Payments		
Unfunded Civilian Retirement		
Depreciateion of MCP Facilities		
Casualty Insurance		
Military Non-Depot Costs		
Other Recurring Costs		
Other Nonrecurring Costs		
	<b>Department of Defense Adjustments</b>	
Contract Administration	Contract Administration	Contract Administration
	Federal Income Tax	Federal Income Tax
Overhead Costs	Overhead Costs	Overhead Costs
Overhead Savings		
RIF Costs	RIF Costs	RIF Costs
	Award Fee	Award Fee
BEG/WIP Adjustment	BEG/WIP Adjustment	BEG/WIP Adjustment
	Cost of Facilities Capital	Cost of Facilities Capital
Govt. Transition (Personnel)	Govt. Transition (Personnel)	Govt. Transition (Personnel)
	<b>Strenght, Weaknesses, and Risk</b>	
Flowdays		Flowdays
Paint Facility	WIP Warranty	

### *Recurring Customer Costs*

Direct Labor is simply the cost of directly chargeable labor applicable to performance of each bid (25:16,31,48; 26:16). Direct Material, expressed as a total

project cost, is the amount of material that is directly attributable to the performance of the bid by each party (25:16,31,48; 26:16). Each bidder also had costs categorized as Other Direct. These costs represent items such as the cost of travel or purchased services that cannot be attributed to other factors. (25:16,31,48; 26:16). Production Overhead refers to the amount of overhead cost that is attributed to production (25:16,31,48; 26:16). The costs included as General and Administrative are those remaining overhead costs that are not associated with production, but are still indirectly attributable to performance of the contract (25:16,31,48; 26:16). The final factor considered under Recurring Customer Costs is Profit. Private entrants provide their expected profit while public entities provide an adjustment to their overhead rates since they are at an advantage due to their non-profit status (25:16,31,48).

#### *Recurring Comparability Adjustments*

- State Unemployment Payments. This factor adjusts the public bid to include the cost of payments that private entrants would have to pay for unemployment benefits. This adjustment is necessary because unemployment payments are not part of the public entrants previous labor costs (25:33; 26:17,A-3).
- Unfunded Civilian Retirement. This represents an addition to the public entrants expenses and negates the effects of DoD contributions the Civil Service Retirement System. The adjustment is made to the public entrant when competing against private entrants. No adjustment is necessary between two public entrants (25:33; 26:17,A-3,A-35).

- Depreciation of Military Construction Program (MCP) Facilities. Construction of depot facilities is accomplished with funds that are separate from the organizations operating budget. To capture the benefit received by the public bidder, the depreciated cost of facilities constructed with MCP funding is added to the public bid (25:33; 26:17).
- Casualty Insurance. This adjustment compensates for the estimated cost of casualty insurance that a public organization would have to pay if operating without the benefit of government self-insurance practices. This factor covers the replacement of facilities and equipment due to casualty losses (25:33; 26:17, A-40).
- Military Non-Depot Costs. Military non-depot costs are the quantified expenses of military personnel assigned to the depot who spend time on non-depot related duties. Examples are military training and parades. Only those military members that support the contracted workload are included in this adjustment (25:34; 26:17, A-35).
- Other Recurring Costs. The public organization must include costs that will be incurred by the proposed alternative. In this case, the cost of test pilots were included in the public entrants estimates, however these personnel were to be government furnished to private entrants. For this reason a reduction in the public organizations estimate was in order. Other factors included in this category are Impact Aid (the amount of funds the Department of Education contributes to local public schools) Retiree Health Benefits, and Base Operating and Support Costs (25:34; 26:17-18).
- Other Nonrecurring Costs. Like the previous category, this adjustment is made to identify costs that the public organization will incur during the course of performing the proposed work. The difference is that this category captures only the one-time



costs. An examination of Case II reveals that only the one-time labor cost of reservists supporting work-in-process for the transition period need be adjusted (25:34; 26:18).

*Department of Defense Adjustments*

- Contract Administration. This factor captures the costs that the public offeror will expend in performing routine administration of the contract. In this Case, it is the cost of additional employees who will monitor and oversee the performance of the contract (25:18,49; 26:23).
- Federal Income Tax. Federal income taxes paid by private contractors reduce the true cost to the taxpayer (25:18,49; 26:24). An adjustment is therefore necessary to level the playing field. This adjustment is made only to the private offerors since the public entity does not pay taxes and therefore does not cause a reduction in the cost of a contract to the taxpayer. Calculations are subtracted from the private entities offer.
- Overhead Costs. This factor captures the increased cost to overhead that will be incurred to workloads remaining at Kelly AFB. The increased cost results from the reduced base from which to “spread” overhead expenses of the remaining workload (25:49,50).
- Overhead Savings. This credit is applied to offerors to offset the decreased cost of overhead rates that would be realized at Warner Robins AFB if the additional workload from Kelly AFB were added. The new work would create an increased base from which Warner Robins could spread existing overhead expenses (25:36).

- Reduction-In-Force Cost Estimate. The workload that will be contracted will no longer remain at Kelly AFB. As a result, there were 1298 positions that were identified for Reduction-In-Force actions. Adjustments considered the cost of lump sum leave, unemployment compensation, medical insurance, PCS costs, training, Voluntary Separation Incentive Pay (VSIP), and Voluntary Early Retirement (VERA) (25:20,38,50). Had there been potential to place affected employees, this adjustment would not have been necessary.
- Award Fees. Adjustments were made to the private offerors annual contract proposal price where the proposal included award fees or incentives. The adjusted amount was computed by adding 65% of the annual maximum fee/incentive to the annual contract proposal price (25:20,50).
- BEQ Adjustment and Work-in-Process. This adjustment was necessary to adjust bid differences resulting from different interpretations in the RFP. For the sake of evaluation only, workload factors for BEQ and WIP were adjusted for all offerors over the same period of time (25:21,40,51).
- Cost of Facilities Capital. Unique arrangements for the disposal of property associated with Kelly AFB made it necessary to adjust private bids downward to compensate for the subsidy, in the form of interest free mortgages and deferred payments, that they would receive. The majority of land, facilities, and equipment, associated with Kelly AFB, were transferred to the Local Redevelopment Agency in San Antonio. This loss of potential revenue and associated lease, below market value, served to subsidize private bids (25:21,51).

- Government Transition Personnel. This factor was necessary to quantify the cost to the Government of carrying Kelly AFB employees that were identified for RIF but not rehired by the offerors. The period of adjustment began with the date of contract award and continued through the RIF period. Calculations were made by month and took normal attrition into consideration (25:22,40,52).

*Strengths, Weaknesses, and Risk*

- Flow Days. In both the Warner Robins and Lockheed Martin proposals, adjustments were made to include the benefit of efforts to reduce the number of flow days below RFP requirements. Dollarization calculations were based on information obtained from the offerors technical proposals and from rates derived from Air Mobility Command (AMC) Flying Hour programs (25:42).
- Paint Facility. The SSEB Technical Team determined risk in the Warner Robins proposal for flow of aircraft through the pain facility during the 2003/04 Fiscal Year (FY). The dollarized addition to their bid accounted for a probable 20% increase in direct labor costs during this time frame (25:42).
- WIP Warranty. The final adjustment in the SA-ALC competition for risk was made to the McDonnell Douglas (MD) offer. MD offered the benefit of a limited warranty for Work In Progress accepted at transition. The dollarized value was calculated at 1% of their WIP proposal. The basis for the rate was obtained from similar commercial warranties.

### **Case III - Workload Competition, SM-ALC**

#### *Case Overview*

This case represents the second of two Public-Private competitions that will be examined. The focus of this case is the solicitation for the Depot Maintenance Workload at the Sacramento Air Logistics Center (SM-ALC) performed at McClellan AFB, California. The 1995 Defense Base Closure and Realignment Commission (DBCRC) directed the closure of McClellan AFB. Under DBCRC direction, a portion of the depot maintenance workload was transferred to the United States Army. Remaining work was to be reassigned after Public-Private competition. Workload involved programmed and unprogrammed KC-135 and A-10 aircraft inspection, maintenance, modification, and Analytical Condition Inspection, and overhaul and repair of Hydraulics, Instruments/Electronics, and Electrical Accessories and non-routed backshop/manufacturing support services (27:4).

As with Case II, specific criteria were established to allow evaluation and comparison of the bids received. The overarching goal was to complete an integrated assessment of Best Value. The primary criteria evaluated centered on Transition, Operations, and Cost. Transition involved evaluation of an Integrated Master Plan, a Personnel Plan, and an Integrated Master Schedule. The Operations factors included KC-135 Aircraft, Hydraulics, Instruments/Electronics, Electrical Accessories, and A-10 Aircraft. Cost factors, the focus of this research, are evaluated in much greater detail in the following paragraphs.

### *Cost Factor Identification*

The following table identifies the factors used for evaluation of the SM-ALC competition. Like the factors identified in Case II, the factors in this case are grouped into four categories: Recurring Customer Costs, Comparability Adjustments, Department of Defense (DoD) Adjustments, and Strengths, Weaknesses, and Risks. Recurring Customer Costs indicate those items that can readily be compared across competing organizations over the life of the contract. Comparability Adjustments refer to those items that are necessary to make costs between different Services or public entities comparable (26:11). DoD Adjustment factors represent overall costs or savings to the DoD that must be considered over the life of the contract. The Strengths, Weaknesses, and Risk category highlights cost factors that are designed to capture a dollar equivalent of historically intangible benefits and risks that arise in conduct of assessing and quantifying the strengths, weaknesses, and risk associated with an offeror. Examples include assessments from the Performance Risk Assessment Group (PRAG) or technical risk assessments from the Source Selection Evaluation Board (SSEB) Technical Team.

Table 4 – Case III Cost Factors

<b>SM Baseline</b> <b><u>Cost Element</u></b>	<b>OO-ALC</b> <b><u>Cost Element</u></b>	<b>Lockheed Martin</b> <b><u>Cost Element</u></b>
	<b>Recurring Customer Costs</b>	
Direct Labor	Direct Labor	Direct Labor
Direct Material	Direct Material	Direct Material
Other Direct	Other Direct	Other Direct
Production OH	Production OH	Production OH
G&A	G&A	G&A
		Profit
	<b>Comparability Adjustments</b>	
State Unemployment Payments	State Unemployment Payments	
Unfunded Civilian Retirement	Unfunded Civilian Retirement	
Depreciateion of MCP Facilities	Depreciateion of MCP Facilities	
Casualty Insurance	Casualty Insurance	
Military Non-Depot Costs	Military Non-Depot Costs	
Other Recurring Costs	Other Recurring Costs	
	<b>Department of Defense Adjustments</b>	
	Contract Administration	Contract Administration
	Cost of Capital	Cost of Capital
	Federal Income Tax	Federal Income Tax
	Award Fees	Award Fees
GFM	GFM	GFM
	RIF Costs	RIF Costs
	Govt. Transition (WIP)	Govt. Transition (WIP)
	Govt. Transition (Personnel)	Govt. Transition (Personnel)
	BOS Costs	BOS Costs
CR/ICSI	CR/ICSI	CR/ICSI
	Contract DMAG Surcharge	Contract DMAG Surcharge
		GFE Depreciation
	<b>Strenghts, Weaknesses and Risk</b>	
	Transition Risk - Schedule/Efficiency	Transition Risk - Labor
	Steady State Risk	Transition Risk - Commodities
	Productivity Risk	

### *Recurring Customer Costs*

Direct Labor is simply the cost of directly chargeable labor applicable to performance of each bid (27:24, 61; 26:16). Direct Material, expressed as a total project cost, is the amount of material that is directly attributable to the performance of the bid by each party (27:24, 61; 26:16). Each bidder also had costs categorized as Other Direct. These costs represent items such as the cost of travel or purchased services that cannot be attributed to other factors. (27:24, 61; 26:16). Production Overhead refers to the amount of overhead cost that is attributed to production (27:26, 62; 26:16). The costs included as General and Administrative are those remaining overhead costs that are not associated with production, but are still indirectly attributable to performance of the contract (27:27,

62; 26:16). The final factor considered under Recurring Customer Costs is Profit. The private entrant, Lockheed Martin, was required to provide an estimation of their expected profit (27:78).

#### *Recurring Comparability Adjustments*

- State Unemployment Payments. State unemployment payments are the amount of contribution the Department of Labor provides to a state's unemployment fund based on employment fluctuations. This adjustment is necessary because unemployment payments are not part of the public entrants previous labor costs (27:28; 26:17,A-3).
- Unfunded Civilian Retirement. This represents an addition to the public entrants expenses and negates the effects of DoD contributions the Civil Service Retirement System. The adjustment equates to the amount of unfunded civilian retirement liability the public offeror will incur based on the number of employees covered by the Civil Service Retirement System (CSRS). The adjustment is made to the public entrant when competing against private entrants. No adjustment is necessary between two public entrants (27:28; 26:17,A-3,A-35).
- Depreciation of Military Construction Program (MCP) Facilities. Construction of depot facilities is accomplished with funds that are separate from the organizations operating budget. To capture the benefit received by the public bidder, the depreciated cost of facilities constructed with MCP funding is added to the public bid (27:28; 26:17).
- Casualty Insurance. This adjustment covers the risk for casualty losses and liability claims the Government assumes because it is self-insured and must pay for each loss

incurred. Private organizations are required to cover these risks, therefore the public offer must be leveled (27:29; 26:17, A-40).

- Military Non-Depot Costs. Military non-depot costs are the quantified expenses of military personnel assigned to the depot who spend time on non-depot related duties. Examples are military training and parades. Only those military members that support the contracted workload are included in this adjustment (27:29; 26:17, A-35).
- Other Recurring Costs. The public organization must include all costs that will be incurred by the proposed alternative. Factors included in this category are Impact Aid (the amount of funds the Department of Education contributes to local public schools) Retiree Health Benefits, Mobilization Support, and Base Operating and Support Costs (27:30-31; 26:17-18).

#### *Department of Defense Adjustments*

- Contract Administration. This factor captures the costs that the public offeror will expend in performing routine administration of the contract. In this Case, it is the cost associated with DCMC oversight of the contract and the establishment of new offices and expansion of existing offices to accommodate the competition workload (27:41; 26:23).
- Cost of Capital. This adjustment is typically applied only to private offerors and represents the amount of income that would have been realized had capital investments been invested in a different fashion. In this case, adjustments were also made to a public offeror due to a teaming relationship with a private entity as part of their bid (27:41, 63).



- Federal Income Tax. Federal income taxes paid by private contractors reduce the true cost to the taxpayer (27:42, 63; 26:24). An adjustment is therefore necessary to level the playing field. This adjustment is made only to the private offerors since the public entity does not pay taxes and therefore does not cause a reduction in the cost of a contract to the taxpayer. Calculations are subtracted from the private entities offer.
- Award Fees. Adjustments were made to the private offerors annual contract proposal price where the proposal included award fees or incentives. The adjusted amount was computed by adding 65% of the annual maximum fee/incentive to the annual contract proposal price (27:42, 64).
- Government Furnished Material (GFM). This factor adjusts bids to compensate for the cost of GFE (or material) provided by the RFP (27:42, 64).
- Reduction-In-Force (RIF)/Transfer Costs. This adjustment accounts for the cost of transferring personnel to other government locations (i.e. OO-ALC) and the expense of RIF's for those individuals, at SM-ALC, who do not transfer to other government jobs (27:42, 64-65). Adjustments considered the cost of lump sum leave, unemployment compensation, medical insurance, PCS costs, training, Voluntary Separation Incentive Pay (VSIP), and Voluntary Early Retirement (VERA) (25:38).
- Government Transition - Work-in-Process. This factor includes the cost of the workload that must be accomplished by SM-ALC during the transition to the winning bidder (27:43,65). Figures are based on projected WIP remaining until the contract period begins.
- Government Transition - Personnel. An adjustment is necessary for the SM-ALC employees who are not placed into other jobs between the period of contract award

and normal attrition. Considerations are made for personnel hired by other bidders, used to complete the Government portion of the workload, retire, quit, or are loaned (27:43, 65).

- Base Operating Support (BOS) Costs. Adjustments for BOS are necessary to account for expense to the government for ancillary services performed for general base-wide services. Costs such as fire protection and security fall into this category (27:44, 65).
- Assets Storage. These costs are for material storage, warehousing, issuing, receiving, etc. over the contract period. Private offerors had to include the cost of services provided by the Defense Logistics Agency (DLA), while the public offeror did not due to existing availability of DLA support (27:44-45).
- Contract Depot Maintenance Activity Group (DMAG) Surcharge. This cost represents a 1.5% surcharge expensed for Industrial Fund overhead charges. This adjustment is applied to the cost of all non-BRAC workload accomplished by a private contractor (27:45, 66).

#### *Strengths, Weaknesses, and Risk*

- Transition Risk – Ogden Air Logistics Center (OO-ALC). There were four areas of risk identified with the transition of workload to the OO-ALC (27:45-47). The first adjustment assumed that there would be a 45% drop in work force efficiency (worst case) impacting projected workload (by OO-ALC partner Boeing) to be accomplished by the remnant workforce at Sacramento. A second area of transition risk was identified in the optimistic 90% efficiency projected by Boeing for new work at the

old C-5 facility at Kelly AFB. This “new” workforce was estimated to begin at 75% efficiency and climb to 85% by the end of the first year.

Additional risk was identified in the OO-ALC offer in its proposal to allow an operating location at SA-ALC to complete a portion of Commodities WIP. Where 80% efficiency was proposed, the cost team determined a 65% rate was more appropriate to account for a worst case scenario. Finally, the OO-ALC bid was adjusted to account for a worst-case efficiency of 65% during year one of operations at OO-ALC (27:47).

- Transition Risk: Labor – Lockheed Martin (LM). Like the OO-ALC proposal, Lockheed Martin proposed leaving a portion of workload behind at Sacramento. Experience with the San Antonio Depot Competition (Case II) showed that efficiencies were overstated during the transition year and therefore an efficiency rate of 65% was more appropriate than the proposed 80% rate. The LM bid was also adjusted to account for the likelihood that its 90% projected efficiencies were unrealistic. The cost team used a rate of 80%, rising to 87%, for this adjustment (27:66).
- Transition Risk: Commodities – LM. The cost team used similar methodology to account for Commodities transition risk. The commodities WIP to be accomplished at Sacramento was proposed to be 80%. The cost team adjusted this to 65% to account for the likelihood of additional risk. The 90% efficiency proposed by LM for direct labor was also adjusted to reflect a more realistic 85% initial rate, which would rise to 87% over the initial contract year (27:67).
- Production Risk – OOALC. This factor was created to “quantify risk from the OO-ALC technical proposal and the risk associated with their ability to estimate future

costs (27:47).” The proposal identified a large reduction (over time) in commodity hours. The basis for this reduction was identified as process improvements and reengineered hours to complete work. The cost team accepted that a reduction of 10% was achievable but reductions beyond that were to be considered as risk. The resulting adjustment quantified the number of hours that exceeded the 10% rate (27:47,48).

- Steady State Risk – OO-ALC. The risk identified in this factor represents the benefit received by a public offeror (here OO-ALC) as a result of full coverage, by the DOD, of net losses in Working Capital Funds (WCFs). This added funding capacity gives the public offeror a significant economic advantage over a private offeror. To adjust for this benefit, the OO-ALC bid was increased. The nature of this adjustment was such that a risk range was deemed more appropriate than a single estimate. This range was added to the other risk factors (Transition and Production to produce a Total Risk Range (27:49) with which to base decisions.

## **Cross Case Comparison**

### *Overview*

The purpose of the following analysis is to summarize the results from the three cases and identify similar and disparate cost factors. In analyzing the three cases, it became immediately apparent that the structure used in the depot comparison, based on the Cost Comparability Handbook (26), was more concise, easier to understand, and more conducive to a thorough cost comparison. The baseline case, using COMPARE

and the A-76 Costing Manual (4) as its guiding reference, while containing more specific factors, tended to lend confusion. The primary source of confusion was that it is difficult to distinguish between factor categories, many with similar labels. Secondly, the more extensive use of “fixed” factors, where the user is asked to simply fill in the blanks, tends to limit comparison to only those factors, even though some provision is made to allow the inclusion of others.

The format for the cross-case comparison will be to use the more extensive list of factors in Case I as the means of comparison. Factors from Cases II and III will then be matched, by definition, to those baseline factors. Unmatched factors will then be subject to further explanation. Table 5, below, is a compilation of the many factors identified in the analysis of individual cases. This serves as the starting point for the matching of factors, which follows.

*Table 5 – Cross-Case Comparison: Initial*

A-76	SA-ALC	SM-ALC
<b>Personnel Costs</b> Salaries Wages Other Entitlements Fringe Benefits Other Pay Overseas Allowances	<b>Recurring Customer Costs</b> Direct Labor Direct Material Other Direct Production OH G&A Profit	<b>Recurring Customer Costs</b> Direct Labor Direct Material Other Direct Production OH G&A Profit
<b>Material and Supply Costs</b>		
<b>Other Specifically Attributable Costs</b> Depreciation Cost of Capital Rent Maintenance and Repair Utilities Insurance Travel Subcontracts Other Costs	<b>Comparability Adjustments</b> State Unemployment Payments Unfunded Civilian Retirement Depreciation of MCP Facilities Casualty Insurance Military Non-Depot Costs Other Recurring Costs Other Nonrecurring Costs	<b>Comparability Adjustments</b> State Unemployment Payments Unfunded Civilian Retirement Depreciation of MCP Facilities Casualty Insurance Military Non-Depot Costs Other Recurring Costs
<b>Overhead Costs</b>	<b>DoD Adjustments</b> Contract Administration Federal Income Tax Award Fee Cost of Facilities Capital RIF Costs Govt. Transition (Personnel) BEQ/WIP Adjustment  Overhead Costs Overhead Savings	<b>DoD Adjustments</b> Contract Administration Federal Income Tax Award Fees Cost of Capital RIF Costs Govt. Transition (Personnel) Govt. Transition (WIP)  Government Furnished Material BOS Costs CRVCSI Contract DMAG Surcharge GFE Depreciation
<b>Additional Costs</b> Current to MEO Transition Costs Plant Rearrangements Training Recruitment		
<b>Contract Administration Costs</b> Compliance Review Payment Processing Negotiating Change Orders Contract Closeout Expenses		
<b>Additional Costs</b>	<b>Strengths, Weaknesses, and Risk</b> Flowdays Paint Facilities WIP Warranty	<b>Strengths, Weaknesses, and Risk</b> Transition Risk - Schedule/Efficiency Steady State Risk Production Risk Transition Risk - Commodities Transition Risk - Labor
<b>One-Time Conversion Costs</b> Retraining Costs Relocation Costs Cost of Joint Inventory Security Clearances Separation Incentives		
<b>Gain on Assets</b>		
<b>Federal Income Taxes</b>		
<b>Minimum Conversion Differential</b>		
<b>Phase-In Period Costs</b>		

### *Factor Comparison*

For clarity, the following convention will be used to differentiate between the individual cost factors and cost categories being compared. Individual cost factors will be italicized while the baseline/COMPARE cost categories, serving as the organizational basis for the following paragraphs, will be underlined.

- Personnel Costs. The first category COMPARE identifies is Personnel Costs. Included factors are *Salaries, Wages, Other Entitlements, Fringe Benefits, Other Pay, and Overseas Allowances*. This ties directly with the *Direct Labor* factor found under the Recurring Customer Costs category used in both depot competitions.
- Material and Supply Costs. The second category used in the baseline model is Material and Supply Costs. This category represents a one-for-one match with the definitional intent of the *Direct Material* factor found in the Depot cases.
- Other Specifically Attributable Costs is the next category identified by COMPARE. *Depreciation* under COMPARE has a direct match with *Depreciation of MCP Facilities* in Cases II and III. *Cost of Capital* and *Cost of Facilities Capital* also form a direct match between the baseline and depots. The Recurring Customer Cost factor, *Other Direct*, in the Depot Cases is broken down into great detail in the COMPARE model. Encompassed in this single category are *Rent, Maintenance and Repair, Utilities, Travel, Subcontracts, and Other Costs*. Another factor in this category is *Insurance*, which has its depot complement, *Casualty Insurance*, under the Comparability Adjustments depot category. The SM-ALC depot competition adds a factor that can be included in this category. *CRI/CSI Assets Storage* is simply the warehouse and packaging expenses that must be included.
- Overhead Costs. In the COMPARE model, this factor represents 12% of the Civilian Personnel Costs identified previously (4:68). This factor, or a calculated and approved substitute, compare with the *Production OH* category in the depots. Both are essentially indirect production expenses. The *G&A* factor and the *BOS Costs* factor from the depots are also identifiable with this category.

- Additional Costs. This factor is a sort of catchall for factors not yet captured. The focus of the COMPARE model focuses on those costs that result from “unusual” or “special” circumstances (4:70). Specifically listed are *Current to MEO Transition Costs, Plant Rearrangements, Training, and Recruitment*. Review of the criteria for factors in the depot cases, these adjustments can be matched to the Comparability Adjustment factors of *Other Recurring Costs* and *Other Nonrecurring Costs*. While the Cost Comparability Handbook (CCH) (26), does not specifically address these COMPARE factors, the flexibility to include them remains.
- Contract Administration Costs. This category of factors, including *Compliance Review, Payment Processing, Negotiating Change Orders, and Contract Closeout Expenses*, has a direct match in the CCH and in the depot comparisons. *Contract Administration*, under Department of Defense Adjustments, is clearly a match.
- Additional Costs. This Category/Factor found in COMPARE contains identical wording to the previous category of the same name. The only discernable difference is the designation that this category be used to adjust for costs incurred by a contract or ISSA offeror but not incurred by the MEO (4:79). As stated previously, this category can be matched with the factors identified as *Other Recurring Costs* and *Other Nonrecurring Costs* in the depot cases.
- One-Time Conversion Costs. Factors such as *Retraining, Relocation, Joint Inventory, Security Clearances, and Separation Incentives* are identified in COMPARE as One-Time Conversion Costs. The government uses a 4% severance factor to cover all costs associated with the involuntary separation of civilian employees. Equivalent Public-Private competition factors are *RIF Costs* and *Government Transition for*



*Personnel* costs. The major difference between models is the use of a standard rate, in the COMPARE model, versus a calculated amount in the Public-Private competition. A case can be made that the Public-Private factors of *State Unemployment Payments* and *Unfunded Civilian Retirement* are also included in the 4% flat rate used in A-76. Other factors mated to this category are the cost of BEQ/WIP and Government Transition (WIP). Though not specifically addressed, they meet the intent of this COMPARE Adjustment.

- Gain on Assets. COMPARE identifies this factor separately from the Cost of Capital category previously discussed. It differentiates itself by identifying as valid, only those costs of capital assets that will be used by the MEO but not made available to the contract/ISSA. The Public-Private competition and the CCH treat these costs as *Costs of Facilities Capital* when adjusting the MEO figures.
- Federal Income Taxes. Both A-76 and Public-Private competitions make provisions for adjustment of bids for potential *Federal Income Tax* revenue. As stated previously, this adjustment accounts for the tax revenue generated by private contractors. This effect reduces the cost of a contract to the taxpayer and must be made equitable to private offerors.
- Phase-in Period Costs. The CCH and depot competitions handle Phase-in Period Costs under Comparability Adjustments category. Specifically, these costs are included as *Other Nonrecurring Costs*.

### *Unmatched Factors*

The following factors are those that remain after logically matching all identified cost factors, found in the baseline case, with all cost factors utilized in the Public-Private depot competitions. When specific guidance, in the A-76 Costing Manual, was not available to directly link factors, a judgment call was made as to a factors proper inclusion. The basis for judgment was built on the perceived intent of the baseline category or factor. Intent was determined through review and interpretation of the available definitional guidance.

- Minimum Conversion Differential. This category/factor has no equal in the Public-Private competition list of cost factors. The merit of this factor rests in its goal to instill a degree of risk reduction for some of the intangible factors associated with a competition. Eggers (Chapter II) highlighted this type of cost factor as a significant barrier to entry for private bidders. The private bidder must, above all things, turn a profit. To win an A-76 competition, a 10% differential must be overcome, even before a private offeror can be considered competitive. Only then can profit be considered.
- Profit. This factor, seen in the depot competitions, has no unique equivalent in the COMPARE model. In the depots, profit was added to the cost of private offerors to clearly identify the total customer cost. COMPARE does not break this factor out explicitly; it is simply part of the aggregate of the winning private offerors bid. COMPARE simply selects the lowest cost after adjustments as the winning bid.
- Military Non-Depot Costs. This depot factor adjusts for the quantified expenses of military personnel assigned to the depot who spend time on non-depot related duties.

The adjustment correctly considers military workload that will still have to be accomplished, at expense to the government, when military positions are eliminated.

- Award Fee. This factor is included in depot competitions to account for the high likelihood of awards or incentives being paid to contactors. A flat 65% is added to the proposed maximum annual award fee/incentive specified in the contract in anticipation of the award/incentive being earned.
- Overhead Costs and Savings. This adjustment is unique to the depot competitions and accounts for the increased costs, at the affected depot, as overhead rates for remaining workload have to be spread across fewer organizations. It also adjusts for the decreased cost of overhead at a public organization, which might obtain workload from another public entity, for opposite reasons. This factor should not be confused with the provisions for overhead previously defined.
- Government Furnished Material. The COMPARE model views GFM as an equivalent value across all offerors and therefore an unnecessary cost to include in the comparison. The cost comparison accomplished for the SM-ALC saw the necessity of adjusting the cost to add back savings identified by OO-ALC. The cost team found that the savings were unsubstantiated.
- Contract DMAG Surcharge. A factor found in the SM-ALC depot competition that is not seen in the other competitions is the *Contract DMAG Surcharge*. This factor is simply an adjustment to the OO-ALC bid to correct for a line-item deduction for the Air Force wide 1.5% surcharge for industrial fund overhead. OO-ALC incorrectly deducted the surcharge for the entire amount but should have included the portion of workload that was going to be accomplished by their private partner, Boeing.

Table 6 provides a visual representation of the results of the cross-case comparison. Cost factors from the Public-Private competition are matched to their equivalent factors in the COMPARE model. Where no exact match was found, the intent of the COMPARE category or factor was ascertained to identify similar factors. Significant in this table are the factors that remain unmatched (identified at the bottom of the table). These factors represent cost considerations that are unique to the Public-Private competition for depots.

*Unmatched Factors – Strengths, Weaknesses, and Risk*

These items (listed below and defined in their respective cases) are distinguished from the previous list of “Unmatched Factors” by their unique purpose.

- Flow Days
- Paint Facilities
- WIP Warranty
- Transition Risk (Labor, Commodities, and Schedule/Efficiency)
- Steady State Risk
- Production Risk

Each represents the dollarization (explained at the beginning of Case II) of the strengths, weaknesses, and risk identified by members assigned to the Cost Team, PRAG, Technical Team, and Contracting Team of the individual competitions. It is in the nature of these factors, that the limitations of COMPARE become most apparent. There are no provisions to adjust bids based on these factors.

Table 6 – Cross-Case Comparison: Final

A-76	SA-ALC	SM-ALC
<b>Personnel Costs</b>		
Salaries	Direct Labor	Direct Labor
Wages		
Other Entitlements		
Fringe Benefits		
Other Pay		
Overseas Allowances		
<b>Material and Supply Costs</b>	Direct Material	Direct Material
<b>Other Specifically Attributable Costs</b>		
Depreciation	Depreciation of MCP Facilities	Depreciation of MCP Facilities
Cost of Capital	Cost of Facilities Capital	Cost of Capital
Rent	Other Direct	Other Direct
Maintenance and Repair		
Utilities	Casualty Insurance	Casualty Insurance
Insurance		
Travel	Other Direct	Other Direct
Subcontracts		
Other Costs		Assets Storage
<b>Overhead Costs</b>	Production OH G&A	Production OH G&A BOS Costs
<b>Additional Costs</b>		
Current to MEO Transition Costs	Other Nonrecurring Costs	
Plant Rearrangements	Other Recurring Costs	Other Recurring Costs
Training		
Recruitment		
<b>Contract Administration Costs</b>		
Compliance Review	Contract Administration	Contract Administration
Payment Processing		
Negotiating Change Orders		
Contract Closeout Expenses		
<b>Additional Costs</b>		
<b>One-Time Conversion Costs</b>		
Retraining Costs	State Unemployment Payments Unfunded Civilian Retirement RIF Costs Govt. Transition (Personnel) BEQ/WIP Adjustment	State Unemployment Payments Unfunded Civilian Retirement RIF Costs Govt. Transition (Personnel) Govt. Transition (WIP)
Relocation Costs		
Cost of Joint Inventory		
Security Clearances		
Separation Incentives		
<b>Gain on Assets</b>	Cost of Facilities Capital	Cost of Capital
<b>Federal Income Taxes</b>	Federal Income Tax	Federal Income Tax
<b>Phase-In Period Costs</b>	Other Nonrecurring Costs	
<b>Unmatched</b>		
Minimum Conversion Differential	Profit Military Non-Depot Costs Award Fee Overhead Costs Overhead Savings	Profit Military Non-Depot Costs Award Fee  Government Furnished Material Contract DMA/G Surcharge
<b>Strengths, Weaknesses, and Risk</b>	Flowdays Paint Facilities WIP Warranty	Transition Risk - Schedule/Efficiency Steady State Risk Production Risk Transition Risk - Commodities Transition Risk - Labor

## **V. Summary**

### **Background**

An increased emphasis on achieving greater efficiencies in government operations has led to greater use of Outsourcing and Privatization (O&P) initiatives to select an offeror, public or private, to accomplish workload that has traditionally been achieved only by military personnel or government civilian employees. Under the guidance of Office of Management and Budget (OMB), Circular No. A-76, Performance Of Commercial Activities, organizations have been identified and selected for competition.

To aid in conducting the competition, a software package, called COMPARE, was developed. The A-76 Costing Manual, produced by the DoD Competitive Sourcing & Privatization Office, complements COMPARE. COMPARE was designed to accomplish a very specific task: to compare a single public bid with that of a single private bid. Further more, COMPARE was designed to accomplish this task in a standardized format that could be applied across a wide variety of generic organizational structures.

Over time, an increasingly wider and more diverse cross-section of organizations has become the target of consideration for O&P initiatives. The range of viable candidates has become narrowed to the point that further competitions are becoming increasingly difficult to model within the constraints of the current A-76 costing model (COMPARE). Specifically, the standardized cost factors used in COMPARE are increasingly insufficient in providing a level playing field on which decision makers can make informed comparisons.

## **Research Questions**

This thesis effort was undertaken to take a detailed look at the cost factors used in the COMPARE model and contrast them with cost factors utilized in the conduct of the more complex Public-Private competitions. These deviations (waivers) from the strict construct of COMPARE are approved in acknowledgement that one model does not fit all. This research answers the following questions:

1. What are the baseline cost comparison factors established in COMPARE?
2. What are the common cost factors found in Public-Private competitions?
3. What are the similarities and differences between the cost factors established in COMPARE and those used in Public-Private competitions?
4. What explains the differences between the cost factors established in COMPARE and those used in the Air Force Depot Public-Private competitions?
5. What changes can be made to make COMPARE more robust in the comparison of more complex public and private entities?

## **Methodology**

The research methodology most appropriate for providing responses to these questions is that of the Case Study (see Chapter III). In order to reign in the scope of study to a manageable level, three cases were selected as representative. The first case represents the COMPARE model itself. Since its use is highly standardized across the DoD, it represents all O&P cases utilizing COMPARE. Case I is the baseline study. To form a basis of comparison, the Public-Private competition efforts at two Air Force Depots were selected for Cases II and III.

Each case was analyzed individually to identify its cost factors, and then a cross-case analysis was conducted to compare and contrast the differences between them. This format is based on the construct of a Multiple-Case, Embedded Design, espoused by Robert Yin (6).

## **Results**

Detailed analysis of the three cases provided significant insight into the differences between the COMPARE model and the Public-Private methodology. Expectations of the limitations of COMPARE were dispelled in favor of a better understanding of its capabilities and purpose. The following paragraphs highlight the conclusions manifested in Chapter IV.

### *Low Cost vs. Best Value*

The dollarization of strengths, weaknesses, and risk decisively separates the A-76 process and COMPARE from the cost comparison conducted in the depot Public-Private competitions. COMPARE sets out to identify the offeror with the lowest cost, responsive bid. Any concern for factoring in a bidders strengths, weaknesses, and risk is subservient to obtaining the lowest cost to the government. The COMPARE model assumes these risks will be attenuated by the type of service being sought (see Commercial/Core Activity discussion below), and adherence to the theory that prices will be driven down and quality will increase through competitive market forces.

The depot Public-Private competitions also seek the lowest cost to the government however, the type and nature of service required mandates that best value be



considered as a significant driving force in selecting a winning offer. Best value is attained through thorough evaluation, quantification, and combination of strengths, weaknesses, risk, and price.

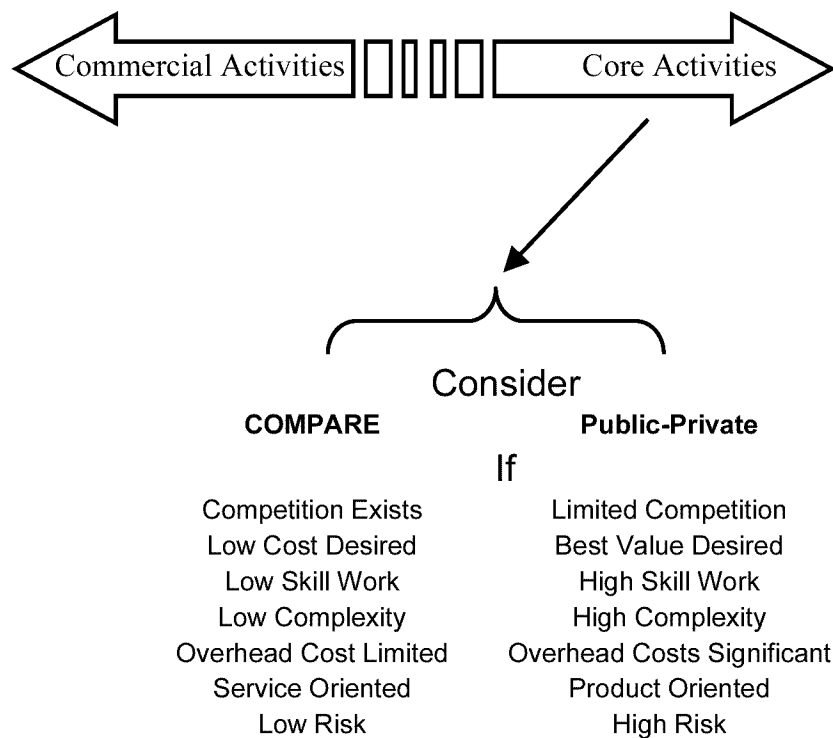
### *Commercial Activities vs. Core Activities*

Chapter II provided significant detail in distinguishing Core Activities from Commercial Activities (CAs). At the inception of COMPARE, competitions were typically for low technology or service oriented activities. Alternative commercial sources were plentiful and the benefits of competition were easily achieved.

As the DoD continued to search for ways to become more efficient, it began to look at activities that were clearly commercial activities, but were also increasingly complex or had limited commercial equivalents. Lines between what was considered a core activity and what was commercial began to blur into a continuum. Movement along the continuum towards core activities necessitated a need for models other than COMPARE to ensure the security of government interests. Deviations to A-76 procedures were approved and Public-Private competitions were initiated to allow inclusion of best value as a criterion for selection of a winning offer.

The following figure provides a graphic illustration of some important considerations in a competition model decision. It is important to remember that only Commercial Activities are considered for Outsourcing and Privatization. The definitions of what are and are not CAs do not change, just the interpretation. This change in interpretation results in movement along the continuum. One extreme highlights a pure Commercial Activity. The other typifies, a pure Core Activity. The model lists some

significant characteristics of each. Movement along the continuum necessitates an in-depth look at the desired end state of the competition. If the activity is service oriented and there are many potential offerors, then COMPARE may be suitable. As activities become more complex, and competition becomes more scarce, the Public-Private competition model should be given more consideration. There is no specific point at which a line can be drawn to delineate a model. All considerations must be taken into account before a method is determined.



### *Is COMPARE Enough?*

Upon inception of this study, many differences, between the cost factors seen in COMPARE and of those seen in the depot competitions, were expected. In reality, only a few were identified. In fact, the seven major unmatched cost factors (which excludes strength, weakness, and risk factors) could all be “custom” fit into the COMPARE model. They were left separate to highlight the probability that most of these costs were never envisioned for inclusion in the model.

Suitability. COMPARE was found to be quite capable of integrating many of the cost factors used in the depot competitions. This does not mean that it is well suited to do so. COMPARE is designed to level the playing field between a single private bidder and a single public offeror. It accomplishes this, primarily, through adjustments to the public bid. To integrate the many factors found in the depot competitions, great care would have to be taken to ensure proper aggregation of applicable costs to the into the cost categories allowed in COMPARE. The issue of including additional private offers would also have to be addressed.

Structure. COMPARE is very rigid in its design. This rigid structure tends to limit thinking beyond the cost factors identified in the A-76 Costing Manual (4). If a cost comparison is conducted, strictly by the guidance provided, the opportunity exists to leave other, possibly important, factors out of consideration. The software and the costing manual act more like checklists to be executed rather than starting points for exploration of necessary adjustments. In contrast, the open structure, provided in the Cost Comparability Handbook, as seen in the depot competitions, lends itself to expand thinking beyond factors identified.

## **Recommendations**

COMPARE should be modified to allow greater flexibility in the conduct of leveling the playing field. The basic framework exists to do so. The following suggestions represent possible solutions to questions raised during the course of this study.

- Eliminate the down-select of private offerors in COMPARE (see Figure 3) to allow head-to-head comparison with more than one private bidder. This includes changing the format to include comprehensive adjustments for each offeror rather than the current approach which provides adjustment, primarily, of the only the public offer (Most Efficient Organization).
- Expand capabilities to adjust bids based on any appropriate cost factor (by bidder). An extensive list of factors exists in the form of the Cost Comparability Handbook (26) and the A-76 Costing Manual. Leave flexibility to include previously unidentified factors.
- Develop standardized tables, computational methodologies, and Cost Estimating Relations (CERs), that can be selected where applicable/appropriate, to model each cost factor. The ability for the cost comparison team to use alternative methodologies or calculations must be retained.
- Include the provision for additional leveling based on strengths, weaknesses, and risk. Due to the highly volatile and complex nature of these factors, the best approach may be to simply allow for the importation and integration of risk assessments accomplished in other applications.

- Change the tone of COMPARE, and its associated costing manual, from that of “here are the factors, here is how you will use them” to one of “there are many appropriate factors, here are many of them, include others as appropriate.”

## **Final Remarks**

The conclusions of this research show that COMPARE continues to be a viable model for the conduct of cost comparisons. The research also shows that there are some significant limitations that must be considered when determining the most appropriate model with which conduct Outsourcing and Privatization initiatives. Ideally, COMPARE should be expanded to encompass a broader range of competitions. For the short term, this does not provide the decision maker with a solution.

The contribution of this research has been to formally identify the capabilities and limitations of the COMPARE model and to highlight areas for possible improvement. Logical avenues for further research would be to formally develop a standardized glossary of cost factors which encompass those identified in this research, the Cost Comparability Handbook, and the A-76 Costing Manual, as well as those revealed through formal evaluation (such as the Delphi technique) of subject matter experts. This new research, along with recommendations from this thesis effort, would form the basis for revision of DoD guidance in the conduct of outsourcing and privatization competitions. A new model, replacing or modifying COMPARE, could then be developed. The benefit of revised guidance, coupled with a single model for conducting competitions, would be more thorough evaluation of important factors, improved accuracy, and elimination of the deviation approval process for routine requirements.

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14. ABSTRACT <p>The purpose of this case study research is to determine the utility of COMPARE, the DoD approved software for conducting A-76 competitions, in the more complex world of public-private competition. COMPARE serves as the baseline for establishing cost factors, while two Air Force Depots are used as a basis of comparison. Research questions answered are:</p> <ol style="list-style-type: none"> <li>1. What are the baseline cost comparison factors established in COMPARE?</li> <li>2. What are the common cost factors found in the Air Force Depot public-private competitions?</li> <li>3. What are the similarities and differences between the cost factors established in COMPARE and those used in the Air Force Depot public-private competitions?</li> <li>4. What explains the differences between the cost factors established in COMPARE and those used in the Air Force Depot competitions?</li> <li>5. What changes can be made to make COMPARE more robust in the comparison of more complex public and private entities?</li> </ol> <p>Results show that the significant difference between competitions is that public-private comparisons explicitly integrate “Best Value” into the cost comparison. This is accomplished through the quantification of strengths, weaknesses, and Risk into dollar values. COMPARE, on the other hand, relies heavily on the assumptions of a competitive marketplace to minimize risk while achieving low cost.</p>					
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